

FIG. 1

The diagram illustrates the T-DNA construct and the *cdr1*-D allele. The T-DNA construct (top) is a triangular structure with a pBS (pseudobulky site) and a 4x35S promoter. Restriction sites for EcoRI, KpnI, and BamHI are indicated. The *cdr1*-D allele (bottom) is a linear DNA sequence with a 5' end, a 3' end, and a 1 kb scale bar. It contains a CDR1 region (indicated by a dashed box) and a CDR1-B region. Restriction sites for KpnI and EcoRI are shown on the CDR1-B region. A *cdr1* cDNA fragment is also shown below the CDR1 region.

FIG. 2

Deduced amino acid sequence (SEQ ID NO:2)

MASLFSSVLLSLCLLSLFLSNANAKPKLGFTADLIHRDSPKSPFYNP METSSQRLRNAIHRSVNRVFHFTEKDNTPQPQ
 IDLTSNGEYLMNVSIGTPPPIMAIADTGSDLLWTQCAPDDCYTQVDPLFPKTSSTYKDVSCSSSQCTALENQASCS
 TNDNTCSYSLSYGDNSTYKGNIAVDTLTLGSSDTRPMQLKNIHCGHNNAGTFNKKGSIVGLGGPVSLIKQLGDSID
 GKFSYCLVPLTSKKDQTSKINFGTNAIVSGSVVSTPLIAKASQETFYLLKLSISVGSKQIQYSGSDSESSEGNIIIDS
 GTTLTLPLTEFYSELEDAVASSIDAEEKQDPQSGLSLCSYATGDLKVPVITMHFDGADVKLDSNAFVQVSKDLVCFADR
 GSPFSIYGNVAQMNFVGYDVTVSKTVSFKPTDCAKM

genomic DNA for CDR1 (SEQ ID NO:1)

GGACATTCTT GGTCTACTCC AAGAATATCA AAGATCCAGT CTCAGAAGAC CAGAGGGCTA TTGAGACTTT
 TCAACAAAGG GTAATATCGG GAAACCTCCT CGGATTCCAT TGCCCAGCTA TCTGTCACTT CATCGAAAGG
 ACAGTAGAAA AGGAAGATGG CTTCTACAAA TGCCATCATT GCGATAAAGG AAAGGCTATC GTTCAAGATG
 CCTCTACCGA CAGTGGTCCC AAAGATGGAC CCCACCCAC GAGGAACATC GTGGAAAAAG AAGACGTTCC
 AACCACGTCT TCAAAGCAAG TGGATTGATG TGATATCAAA GATCGGAGAG TTATTTTATT TTAATTGTAC
 TATATTTATA TTGTGATGTT TCTCTTAAAT TAAAAATTTA TGACTATATA TATGACAATA TATATATATA
 TATATATATA TATATACATT ATTGAGATAG ATAATGAATA CATTAGTTTA TCATTAAATT TAATAGGTAC
 TGATCTTCAA ATTATTTTCA AACGATTCTC TGTCAAATTC AGTTAAATGT TTCTGTACAT GCCACGGATC GAAAATGAGT
 AAAAAATAGA CTGATTTAAC AAACATTAAA AGTTAAATGT CACATTGTAT ATACCTAAGT AAATGATACA GACCAAATTT
 CAGTAAATGA ATATTTTITA CCTAAAGTCA TATCCGGTTA TATCCGGTTA CATTCTTGA ATACTTTAAT GAAGAATCTA
 AGAAGATCAA GAATCCTTAT ATTACGAAAA AGCATTTAGA AATAAAATAA CTTGGAGATA TAAGCAAACC
 GGATATAATT AAAGAAGAAG AAAATATGTA AGCATTGATA CTCCTCGTAA ATAAATAAAT ATATGCATCA AAATGAGAAA
 ATAAACACGT CCATATGAAT GAATGGTACA CTTCTCTCTG AGATTCTCTG AACACAAAAT GATATAATTT GTAGATAACT
 ATCTTCACCT TTATTTATTC TTAATACGTC ACTATCTATT ATCATTTTATT AACCAACCATC TCATTAACTCT TATAAATATG
 TACTCAAAAC GTAAGAACTC ACTATCTATT ACAATACACT TTAAACTACA AATCAAAACA ATGGCCTCTC
 TACTCAATTAG ATTGTCAAAA GTAAACCTC TACTCTCTC TACTCTCTC TCAAATGCAA ACGCTAAGCC
 TATTCTCTC AGTCTCTTG TCTCTTTGTT

FIG. 3A

AAAACTAGGC TTCACCGCGG ATCTAATCCA CCGTGATTCT CCTAAATCCG CGTTCTATAA CCCGATGGAA
 ACCTCTTCCC AGCGTCTACG AAACGGGATC CACCGATCCG TTAACCGTGT TTTCCATTTC ACTGAAAAGG
 ATACACACC ACAACACACAG ATTGACCTCA CCTCAAATAG CCGTGAATAT CTCATGAACG TATCCATTGG
 AACACCTCCT TTCCCGATCA TGGCCATCGC CGACACCGGA AGTGATCTCC TCTGGACGCA GTGGGCACCA
 TCGGATGATT GTTACACTCA AGTTGATCCT CTCTTTGACC CTAATAACGTC TTCCACATAC AAAGACGTTT
 CTTGCTCCTC AAGTCAATGT ACTGCCCTAG AAATCAAGC CTAATCAAGC ACAATGACA ACACCTTGTTT
 TTAATCATTTG TCTTACGGGG ATAACTCATA CACAAAGGTT AACATCGCCG TGGATACCTT AACGCTCGGC
 TCCAGCGATA CCCGCCCTAT GCAGCTTAAG AATATTATTA TCGTTGTGG TCACAACAAC GCTGGAACGT
 TTAACAAGAA AGGCTCTGGA ATCGTCGGAC TAGGTGGTGG TCCGGTTTCG CTTATCAAGC AACTTGGCGA
 CTCCATCGAC GGTAATTTCT CATACTGCTT GGTTCTCTA ACTTCCAAA AGGATCAAAC GAGTAAAATC
 AACTTCGGAA CCAATGCCAT CGTGTGGGA TCAGGAGTTG TCTCAACTCC TCTGATCGCA AAGCGTCTC
 AAGAGACCTT CTATTACCTA ACCCTAAAAT CCATTAGCGT GGGAAGCAAG CAAATCCAAT ACTCAGGCTC
 AGATTCTGAA AGCAGCGAGG GAAACATCAT CATCGATTCA GGCACAACCT TAACGTTATT ACCGACTGAA
 TTTTACTCCG AGCTCGAGGA TCGGTTGCA ATCTAAAAGT TCCAGTCATT ACTATGCATT TTGATGGAGC
 GTTGAGTCT ATGTTACAGT GCAACCGGAG ATCTAAAAGT TCGGAGGATT TGGTTTGCTT TGCCTTCCGC
 CGATGTGAAG CTTGACTCCT ATACGGTAAT GTGGCGCAGA TGAACCTTCT TGTGGATAC GACACTGTTT
 GGAAGCCCGA GTTCTCCAT CCAACAGATT CCAACAGATT GTGCAAGAT GAGTTGTTT CATCTCAACA TGTTTTTCAA
 CCAAAACGGT GTCAATTAAAG TAATGGCTGA TTTAGTTTCA GCCTTAGTTC TTTTGAATTT TTCTAATTCA
 AATTGTGTTT TCAATTACAA TCTATCTTT CAAGGGAGAG TTAATTTCTC GACCTTTTGT TCTTTTGGTG ATGCTTTGTA
 CATGTAGTAG TCTATCTTT TTTTCAATCA CAAATTAAAT CATGAAACC TTATCTCCGG TAACTATTTT CTTGTCCATC
 TTTCCCTTGAA TTTTCAATCA CAAATTAAAT CAAATCAATCT ATATCAATAT TACTAGATAA GACAAGACAA TTCTATAATT
 TCTATACTCT GTTTTAGTTT TTTTCAATTT TTTTCAATTT TACTAATAA ATCTAGAAAT ACTACTTTTG TGTCTATTAT
 TTGTTCAAAA TTTAGTTTT ATAAGAAACA GATGAATGTG ATTCTAATTC AATATTGCTT TTAAGGAATT
 ATTATTGTGA TGAAATACCT TTTTGTGTTG TTTTGTGTTG TTTTGTGTTG TACTATATTC AATGGGATTA TGGATTATAG
 ATATTGGTCC TACTATTCTA TTTTGTGTTG TTTTGTGTTG TTTTGTGTTG TTTTGTGTTG TTTTGTGTTG TTTTGTGTTG
 AAATATTTTG AAATATTAT ACTATTATT ATAAATAAT CAATTAGTTT TTTTGTGTTG TTTTGTGTTG TTTTGTGTTG
 AAAATAAAT ATATCTTATA AGAATAAAT ATATTATA TTTTGTGTTG TTTTGTGTTG TTTTGTGTTG TTTTGTGTTG
 AGTGGATGA TACATGGCCT AAATTAGATC ATGAATCATA AAATCCAGC TGTAGATAAA CATAACAAGG

FIG. 3B

ATGAATGGTA CAATCCTGGT CAAAAAAAT AAAAGGAAA GTTATATGCA TTAAATGAG AAAATCTTCG
 CTTTATTGT TTCTATTTA TCAGATTCTC TAAATGTAAA TGACACAATT TGAGATAAT TTAGTAAAA
 TGTAAGAATC TCATCATGTA CTACCATTTA TGAATCCTTA TCCAATTGAC CTTATAATA TTAGTCATCA
 GATTGTCAA AGTAAAACT GACCATTCAG GCAATCACTT AACTACAAT CTAAGAAAAAT GGCTCTCTA
 TTCACITCAC TTCTCTTGT TCTATGTTA TTCTCTCTC CTATTTTCTC AACGCAAAC GCCAAACCAA
 AACTAGGCTT CACCGGGAT CTGATCCACC GCGATTCTCC TAAATCGCCA TTCTATAACC CGCGGAAAC
 CCTTCCCAA CGTATGAGAA ACGCTATCCA CCGATCCTTT AACCGTGCTT CCCATTTCAG TAATCTTTT
 GAAAAGGATG CATCACTTAA CGCACCAAA ACTGATATCA CCAATATTT CCGTATATAT CTTATGAACG
 TATCCCTGG GAGTTGGAC ACCTCCGTC CCAATCATGG CCGCGCTGA CACCGAAGT GATCTCAICT
 GGAGCAGTG CAAACCATGC GATGATTGTT ACACTCAAGT GCTCTAAAAG ATGATGCTTC TTGTTCCAAA
 CACATACAA GACGTTTCTT GCCCTCAAG CCAATGTAGG GCTCTAAAAG ATGATGCTTC TTGTTCCAAA
 AAAGACAACA CTTGCTCTTA CTCATGAAT TACGGGATA ACTCATACTC ACGGGTAAT GTCGCTGTG
 ATACCTTAA GCTCGGCTCC ACCGATAACC GTCCGGTGA GGTAAAGAA ATTATCATCG GTTGTGCTC
 CGAAAACGCT GTACATTTA GAAACAAGAG CTCTGGAATC GTTGGACTG GTGTTGGTGC GGTTCGCTC
 GTTAAACAAC TCGGAGACTC CATCGAAGT AAATTCTCAT ACTGCTTGGT ACCTGAAAAT GATCAAAACGA
 GCAAGATTAG TTTCGGAACC AATCGGTTG TGTCGGGACC GGAACCTGTC TCAACTCCTT TGGTCGTGAA
 GTCTCCAGAG ACCTTCTATT TTCTAACCTT AAATCTATT ACCGTGGGAA GCAAGAATAT GCCAACCCCA
 GGCTCTGATA TCAAGGAAA CATGGTCATC GATTCGGGCA CAACCTTAAC TCTGTTACCT GGGAAATATT
 ATTTCCAGAT TGAGAGTGT GTTGGCTCTT TAATCGATGC AGAGAGTGC AAAGATGAAA GAATCGGTT
 GAGTCTTTGA TACAATGCAA CCGCAGATCT GAAAGTCCCA GTCAATTACTA TGCAATTCGA TGGAGCAGAT
 GTGAAGCTTG ATTCCTATAA TTCAATTTT AAAGTCTCAG ATGATTGGT TTGCTTTGCC TTGGCTTGA
 ACTTGATTAC GAGGATGGG ATATACGGGA ATGTGGCGCA GAAGAATTT CTTGTTGGAT ACGACACTGT
 TTCCAAATCG TTGTCAITTA AAAAACAGA TTGTGCAAAG ATGTAGATGG TTCAGCTTAG CATGTGGCTA
 ATTCCCTTTTCAAAGTATGTTTTCAGTTATCATATTATGCTGATTGATTAGCCTTAAATAGTTA TTGAATTC

FIG. 3C

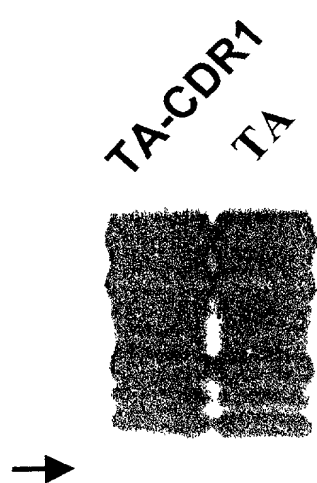


FIG. 4A

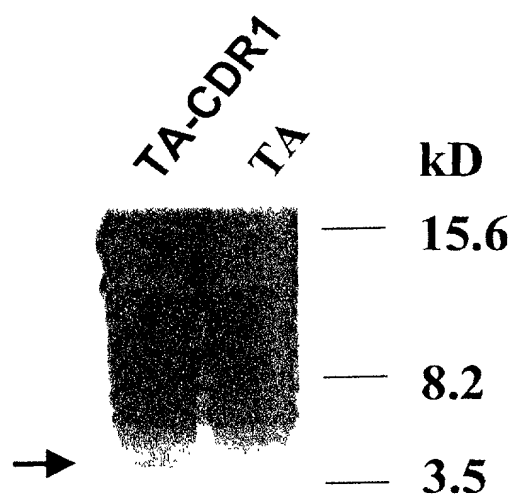


FIG. 4B